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Family Planning Digest

A publication of The Bureau of Community Health Services, Health Services Administration, Department of Health, Education and Welfare.

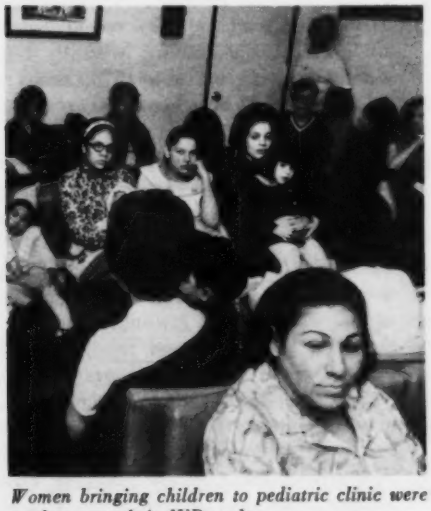
APHA – 1973

Experts Report on Method Complications; Need for Services; Sterilization Rates, Costs

More than 60 papers concerned with various aspects of family planning were presented at the one hundred and first annual meeting of the American Public Health Association (APHA), the country's largest multidisciplinary health organization, held in San Francisco last November 4-8. Physicians, nurses, program administrators, epidemiologists, sociologists, statisticians and systems analysts were among those reporting experience in the field. Summaries of some of these reports appear immediately following and elsewhere throughout this issue of *Digest*. They show:

- the possible association of IUD use and pelvic inflammatory disease;
- the proportion of low-income women in need of family planning services and those served in seven areas of the country;
- sterilization rates for women participating in federally funded family planning programs;
- factors affecting the cost of sterilization;
- the status of family planning in state and local health departments;
- the risk factors for stroke among pill users, in combination with other factors such as hypertension and smoking;
- reproductive efficiency in the United States and how it can be improved;
- complication rates following vasectomy, as reported by vasectomized men (see p. 14).

The APHA Governing Council passed several resolutions relevant to the family planning field. These concerned federal regulation of medical devices, involuntary sterilization, and availability of abortion.



Women bringing children to pediatric clinic were used as controls in IUD study.

IUD Use Linked to Pelvic Infection

A retrospective pilot study of patients at the Downstate Medical Center in Brooklyn, New York, suggests "an association between acute, first episode pelvic inflammatory disease [PID] and IUD wearing," Dr. Nicholas H. Wright of The Population Council reported. Twenty-four of the 50 PID patients studied used IUDs, compared with only nine of 100 matched controls.

Wright noted that "most attacks of acute PID are mild and can be successfully treated with the IUD in place. Very few of these women require hospitalization." [Pelvic inflammatory disease may, however, among some women, lead to infertility and, if untreated, may even result in death.] Since the estimated risk of mortality is quite low, lower than the risk of fatal thromboembolism associated with oral contraceptive use, the physician told *Digest*, "in our judgment the situation does not justify abandoning the IUD."

Methodology

Fifty sexually active women who developed PID for the first time and who had not delivered a baby or had an abortion in the six months prior to the study were matched for

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age, marital status and time since last pregnancy with two groups of sexually active controls — one selected from the general medical clinic, the other from women accompanying sick children to the pediatric clinic. In a few instances, friends of women from the latter group were used as matches for never-pregnant women in the PID group. A questionnaire covering reproductive and sexual history, contraceptive practice and demographic characteristics was administered to all cases and controls. PID was diagnosed when, in addition to a fever of 99.8° F or more, two out of three of the following findings were present: lower abdominal pain and tenderness; tenderness of the uterus when it was moved during examination; or tenderness of adjacent, related organs. Forty of the 50 PID cases were sick enough to be admitted to a hospital.

Findings

More than half the cases and controls (54 percent) were aged 20-29, one-quarter were 30-39 and 20 percent were 19 years of age or younger. Only two percent of these women were 40 or older. No significant difference was found between the study group and the controls in frequency of intercourse, number of sexual partners in the previous four months and gynecological history, all of which are considered relevant in the etiology of PID. The ethnic composition of the groups was similar, with blacks making up 40 of the 50 PID patients and 38 of each group of controls. Eight of the PID group were of Spanish-speaking origin compared to 11 and 12 of each of the controls. Two of the PID group were white as were one of each of the controls. Family income among all groups was similar, with 19 of the PID women and 20 and 21 of each of the controls reporting that they were on welfare. Among the remaining women, those in the PID group came from somewhat higher income households than their controls.

Contraceptive Practice

The major difference between the study group and their controls was in current contraceptive practice. Twenty-four of the 50 PID patients were IUD users, Wright reported, compared to only nine of the 100 women in the combined control groups. By contrast, he noted, the difference between current users of oral contraceptives in the two groups was not statistically significant. None of the 50 PID cases, but nine of the 100 controls, had been sterilized. A larger proportion of controls than cases were currently not using any contraception.

The investigators analyzed the data to determine whether the higher incidence of induced abortion reported by the PID group (ever-pregnant women in this group were twice as likely to have terminated their last pregnancy with an induced abortion) might have played a role in the greater incidence of PID among IUD users. Wright explained that it might be argued that women having an induced abortion might be more apt to have an IUD inserted to prevent another unwanted pregnancy, and independently, be more vulnerable to PID six months or more after instrumentation. However, he said, "there is no evidence suggesting that PID cases with recent induced abortion are more likely to be wearing IUDs." In fact, the women who terminated their last pregnancy with an abortion were actually *less* likely to be wearing an IUD than women whose last pregnancy ended in some other manner (seven of 13 of those having an abortion, compared with 17 of 28 of other ever-pregnant women). In any case, Wright added, "only a minority of ever-pregnant PID cases (13 of 41) had ever had an induced abortion. Although this proportion was higher than among controls, it cannot . . . explain away the main study finding." If women whose most recent pregnancy ended in induced abortion are excluded from both cases and controls, 46 percent of PID cases were using IUDs compared with seven percent of controls.

Wright stated that the data suggest "a ninefold increased risk of PID among IUD wearers as opposed to nonwearers." He added: "It would require an unreasonable amount of bias to explain away the strong association between PID and the IUD in this study."

Wright offered a theory about why IUD users might be more likely than nonusers to contract PID, usually long after the device had been inserted. (Only two of the 24 PID patients with IUDs had been using them for less than six months.) He noted that "the tendency of PID to develop during the first half of the menstrual cycle has been frequently reported." Many IUD wearers have irregular bleeding patterns, including intermenstrual bleeding. "All other things being equal," Wright commented, "this concomitant of IUD use may expose wearers to a higher risk of acute PID from ascent [into the upper genital tract] of both pathogenic and normally non-pathogenic bacteria."

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56% of Low-Income Women in Seven Areas 'At Risk'; 40% Use Organized Programs

Surveys taken in seven U.S. communities confirm recently published estimates that about 55 percent of low-income women of reproductive age are at risk of unwanted pregnancy at any given point in time. In the communities surveyed — in Arizona, Illinois, Iowa, Louisiana, New York, Tennessee and Texas — the proportion at risk averaged 56 percent. The findings were reported by Louise M. Okada and Gerald Sparer of the DHEW Health Resources Administration.

In each of the seven areas, between 53 percent and 60 percent of the women from families with incomes at or below 150 percent of the federal poverty level [in 1972, the year the study was made, this was $6,413 for a nonfarm family of four] were at risk — fecund, sexually active, and not pregnant or seeking pregnancy (see Table 1). A nationwide estimate of 55 percent at risk was made by Joy G. Dryfoos, of the Center for Family Planning Program Development (CFPPD), in a study of the need for subsidized family planning services in the United States published in *Family Planning Perspectives*. The Dryfoos estimate applies recent research findings on sexual activity, fecundity, family size and spacing desires to 1970 Census data on women 15-44 by age, marital and poverty status.

Twenty-two percent of the low-income women at risk in the seven study areas received family planning services from private physicians, the investigators reported, a figure which confirmed another national estimate made by CFPPD. In addition, an average of 40 percent of low-income women in the seven areas received family planning services from organized programs — compared to 36 percent for the nation as a whole as estimated by CFPPD by comparing service data from the National Reporting System and other family planning record systems to the need estimate.

Methodology

Between 1,156 and 1,564 women aged 15-44 were interviewed in 1972 by National Analysts, Inc., in each of the study areas: Tucson, Arizona; Rockford, Illinois; three counties in Iowa; Rapides Parish, Louisiana; Harlem and the South Bronx in New York City; Davidson County, Tennessee; and San Antonio, Texas. In all except Rockford there were OEO- or DHEW-supported family planning clinics. Two groups of women were not interviewed about contraceptive practice and risk status: never-married, never-pregnant 15-19-year-olds, and any individuals who had resided in the area for less than one year. For the latter group, it was assumed that the percentage at risk would be the same as that for women residing in the area for a longer period of time; for the teenagers, Okada and Sparer noted, risk was calculated using the same estimate used by Dryfoos (31 percent for those at or below 150 percent of poverty and 27 percent for those above 150 percent of poverty).

At Risk of Unwanted Pregnancy

In the seven areas it was found that from 53 to 60 percent of low-income and from 52 to 65 percent of higher income women were at risk.

"The striking feature" of the proportion of women at risk in each of the sample areas, said the investigators, "is the uniformity in the proportion of population at risk of an unwanted pregnancy . . . , considering the diversity in ethnic groups and geographic spread represented by these areas." This finding, they noted, "suggests that the Dryfoos national estimate of 55 percent of low-income females 15-44 years at risk of an unwanted pregnancy . . . appears to be more than adequate for program planning purposes in local areas." The "crucial" factor in determining local need for subsidized services, the investigators said, "is the proportion of low-income women" in the population.

Within the group at risk, there was a fairly wide variation in source of family planning services. In Rockford, where there were "practically no organized family planning resources when the survey was conducted," 50 percent of the at-risk, low-income women received services from private physicians, 14 percent from organized programs, and 36 percent received no medical family planning care. Each of the other areas had larger organized programs — used by between 32 percent (Iowa counties) and 57 percent (Harlem-South Bronx) of the low-income women at risk. Use of private physicians was concomitantly lower in these areas, ranging from seven percent in Harlem-South Bronx to 28 percent in Tucson. Nonuse of medical family planning services ranged from 32 percent of those at risk in Tucson and Rapides Parish to 47 percent in the three Iowa counties.

Overall, 22 percent of the women with incomes at or below 150 percent of poverty used private physicians, 40 percent received services from organized programs, and the remaining 37 percent did not use medical family planning services. Among women from families with incomes above 150 percent of poverty in the same areas, nonuse was about the same, but private physicians accounted for 39 percent of patient care in these areas.

Table 1. Percent* distribution by poverty level and race of low-income women aged 15-44 in seven sample areas, and risk category for women from families with incomes below 150 percent of federal poverty level in each area and in national estimate

Poverty and risk status	*Tucson*	*Rockford*	*Iowa counties*	*Rapides Parish*	*Harlem-S. Bronx*	*Nashville*	*San Antonio*	*U.S.*
≤150% of poverty	25	15	16	40	52	21	36	21.4
Black	5	31	0	61	48	45	10	—
Spanish-speaking	43	3	5	0	45	0	77	—
Other	52	66	95	39	6	55	13	—
Sterile	14.3	15.7	12.7	13.0	19.0	18.3	7.8	14.5
Pregnant or seeking pregnancy	6.0	10.2	4.8	10.5	8.1	8.3	7.4	5.1
Sexually inactive	26.4	19.2	24.9	21.2	15.7	19.2	25.0	25.7
At risk (including subfecund)	53.2	55.0	57.5	55.2	57.2	54.2	59.8	54.8

*Percents may not add to 100 because of rounding.

Sources: for seven sample areas, L. M. Okada and G. Sparer, "Is There a Need for Public Assistance in Family Planning?" paper presented at the annual meeting of the American Public Health Association, San Francisco, Calif., Nov. 5, 1973; for national estimate, J. G. Dryfoos, "A Formula for the 1970s: Estimating Need for Subsidized Family Planning Services in the United States," *Family Planning Perspectives*, 5:145, 1973.

Contraceptive Practice

Data were also gathered on contraceptive use in the survey areas. Overall, 53 percent of the low-income women at risk, and 54 percent of higher income women, were using either oral contraceptives or IUDs, the survey found. This includes married women aged 15-44, unmarried women aged 20-44, and

unmarried, ever-pregnant, sexually active 15-19-year-olds.

The 1970 National Fertility Study (NFS) reported that 44 percent of all currently married women under age 45 were pill or IUD users, and 21 percent used the condom or diaphragm. In the seven study areas, six percent of the low-income women and 10 percent of those with incomes above 150 percent of poverty used either of these methods — leaving 41 percent of low-income women at risk and 36 percent of higher income women at risk using the least effective contraceptive methods or no method at all against 35 percent in the NFS survey (with its somewhat different sample base). About one-fifth of all women at risk in the seven study areas, both those below and above the 150 percent of poverty level, are currently using no contraceptive method; and an additional one-fifth to one-third may need family planning services to upgrade their current method.

Okada and Sparer observed that although "it appears that much of the family planning service need gap between low- and higher-income women has been closed," this does not mean that "public responsibility to low-income women in family planning has been met." A large proportion of these women are receiving services from private doctors, they observed, and "the expense of this care penalizes the low-income women by directly competing with other basic needs of the family." They pointed out that despite the fact that more than half of women at risk were using the most effective medically supervised contraception, the 1972 fertility rate of low-income women in the survey areas (from 94 to 152 births per 1,000 women of childbearing age) was substantially above that of higher income women in these areas (58 to 120) as well as above the national rate of 73 per 1,000.

Okada and Sparer concluded that "if the present Federal expenditure in family planning is not slated to rise dramatically, then only a fraction of the [estimated] 5.7 million low-income women at risk . . . can be served by the present level of Federal dollars in family planning. Such a financial constraint would imply a program strategy that would encourage funding of the larger projects which serve large numbers of women at lowest cost and avoid funding the small, uneconomic projects. At the same time, efforts should be expanded in creative financing, programming and education to reduce unmet need in family planning at the lowest cost."

White Women in Federally Funded Programs Had Higher Sterilization Rates than Blacks

White women receiving family planning services from federally funded family planning agencies in 1972 had higher rates of sterilization at most age-parity levels than either black women or women of Latin American descent using these services, Denton Vaughan of the Social Security Administration reported. This conclusion was based on an analysis of patient data reported to the National Reporting System for Family Planning Services for those programs which performed at least 20 sterilizations in 1972 (such agencies accounted for almost 90 percent of sterilizations reported to the system). Vaughan also noted that there was little difference in the sterilization rates between white welfare recipients and nonrecipients, although nonwhite women receiving public assistance tended to have higher sterilization rates than nonwhite nonrecipients.

An examination of the data, standardized by the age and parity of the women involved, shows that women who were black, of Spanish extraction and women receiving public assistance made up a smaller proportion of the sterilized women than they did of the total patient population in these projects.

The sterilization patients — 6,384 altogether — were, as might be expected, older and of higher parity than the general clinic population, which included 613,263 women. The median age of those sterilized was 28.1 compared with 23.0 in the general clinic population, and the median parity of those women sterilized was 4.1 compared with 1.6.

All patients were classified by age and parity, resulting in 20 groups (four parity categories and five age categories). Whites had the highest sterilization rates in 11 age-parity categories, blacks in six and Latin Americans in three. Whites had the highest rates for women 30 and older and those with parities of one-four, while blacks had the highest rates of those under 30 and of parity zero or five or more. The 11 categories in which whites had the highest sterilization rates accounted for 72 percent of all sterilization patients. Categories in which rates for women of Latin American descent were at least 10 percent *lower* than the other two groups accounted for 82 percent of the sterilization cases. The highest rates were for women aged 20-24 with parity five or more (blacks 112.8 per 1,000 women served, whites 104.3, Latin Americans 67.5).

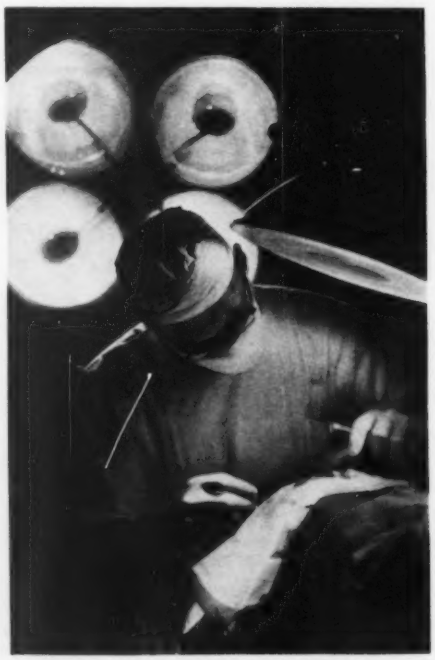
When the data were analyzed by welfare status, there was little difference in sterilization rates between white welfare recipients and nonrecipients. Among nonwhites, however, the rate was significantly higher among women receiving public assistance. Vaughan noted that "if the sterilization rates for nonwhite public assistance recipients were at the same level as those for nonrecipients of a similar age and parity, approximately one in four of the nonwhite welfare recipients who were sterilized in 1972 would not have been sterilized."

Four Factors Affect Cost of Sterilization

As with any other elective medical procedure, the cost of contraceptive sterilization to a couple may influence their decision whether or not to opt for the procedure or some alternative means of preventing conception. Four major factors affecting these costs, according to Charlotte Muller, Professor of Urban Studies at the City University of New York, are the type of procedure used, the place in which the operation is performed, restrictions on availability of the service and the level of third-party coverage of costs.

Vasectomy costs less than any of the female procedures because it requires virtually no hospitalization. A survey in Jacksonville, Florida, Muller noted, showed an average cost in the private sector of $150 for vasectomy, but $586 for female sterilization (including hospitalization and anesthesia). Postpartum tubal ligation is less expensive than interval procedures because the cost is only an increment to the cost of the delivery. It is still higher than vasectomy.

The major factor in sterilization costs is hospitalization. "The necessity of hospitalization adds so greatly to unit cost that one is surprised by the lag in adapting vasectomy to an outpatient setting," Muller noted. "Possibly this will disappear except for men with some health risk or other reason for admission." Endoscopic techniques — laparoscopy, culdoscopy and hysteroscopy—may permit lower cost for female sterilization through outpatient treatment, but they "require considerable skill in abdominal surgery" and therefore "safe removal of



Sterilization costs are higher in hospitals.

[female] sterilization from the hospital setting appears to lie in the future."

While voluntary sterilization is legal in all states, administrative and statutory restrictions still limit the availability of sterilizations. In some places, a waiting period is mandatory before the operation can be performed. In others, consent of the spouse is required; there is a minimum age; only married individuals may be sterilized; or the procedure may be carried out only in licensed hospitals. Even when a state has no restrictive laws, a local medical community may take a restrictive position, effectively limiting availability.

"We know from . . . experience that restricted supply is associated with higher price," Muller commented. "Certainly, restricted access to sterilization prevents economies of scale in delivery of service and it adds travel and search costs to the expenditures of the couple seeking care."

In many cases, the question of whether a sterilization procedure is covered by health insurance will be a key factor in deciding whether or not to seek such services. Voluntary sterilization is covered by Medicaid in 38 states, but Medicaid itself is limited primarily to those on welfare. Sterilization is covered by Blue Cross plans, however, unless it is specifically excluded — and this exclusion exists in only three plans, with one other covering only females. Another plan requires "medical necessity," and several impose a waiting period (as long as one year). Although x-rays are required at a rate of more than one per sterilization procedure, 12 plans would not pay for them and four others would only partially cover the costs.

Blue Shield does not normally cover sterilization, but will do so if a group requests it. Commercial health insurance may often exclude sterilization as "unrelated to illness or injury." And while postpartum sterilization is currently the least expensive, commonly available female approach, it may often not be covered in such policies because maternity coverage is often low or nonexistent (41 percent of individuals covered under new group policies in 1971 had *no* maternity benefits). Therefore, vasectomy, interval procedures and hysterectomy, which are considered part of general surgery, usually have better insurance coverage than postpartum sterilization.

As sterilization becomes more common, Muller notes, "doctors will have more experience," which should help produce "a low complication rate . . . thus bringing aggregate costs down." Although less patient selection may mean including individuals at greater risk of complications, including psychological after-effects, Muller points out that "this could be offset by the improved psychological climate coming with greater acceptability."

Most State and Local Health Departments Had Family Planning Programs in 1973

Ninety percent of state health departments and 61 percent of large local and county health departments stated that they had family planning programs in 1973 in response to a survey conducted by investigators from the University of California's School of Public Health in Berkeley. The survey, reported by Dr. Helen M. Wallace and coauthors, showed that almost all of the reported local family planning programs included clinical services, but more than four in 10 of the state programs had no operating responsibility for such services. Most of the programs, both state and local, were directed by physicians, although nurses constituted the bulk of full-time administrative and consultative personnel. An average of 2.8 such full-time staff were employed by the responding state health departments, and an average of 2.1 by the local health departments. Eighty percent of the state family planning programs were lodged in maternal and child health (MCH) units, but fewer than half of the local programs were part of MCH.

Dr. Wallace reported that a questionnaire was mailed to each of 55 state health departments (including territory and trust health departments) and to the 142 health departments serving cities with populations of 100,000 or more, or counties with populations of 500,000 or more, according to the 1970 Census. A total of 172 agencies responded, including 49 state and 123 local health departments, for an overall response rate of 87 percent.

State and local health departments showed very different patterns, Dr. Wallace reported. Forty-four of the 49 respondent state health departments said they had family planning programs, and in 35 of these administrative responsibility was located within MCH units. Only eight state health departments lodged responsibility for the family planning program in a separate family planning unit outside of MCH. Twenty-five programs reported that they actually operated clinic services.

Local Health Departments

On the local level, just 75 of the 142 respondent health departments reported that they had family planning programs, and in only 34 of these was responsibility centered in MCH units. Just as frequently, operating responsibility was given to a separate unit not related to MCH. All but one of the local programs which had a family planning program reported that they actually operated clinic services.

A total of 121 full-time family planning positions were filled in the 44 state health departments reporting family planning (approximately the same number— 106 — reported to the Center for Family Planning Program Development, which surveyed the same state agencies at another time during the year). A total of 160 full-time positions were reported in the 75 local family planning programs. The state programs also reported employing 116 part-time professionals in such positions, and the local programs reported 300 such part-time staff. Most of these were doctors. In 30 of 44 state and 63 of 75 local health departments the family planning program was directed by a physician — most often a public health doctor or an obstetrician. Physicians, however, make up just about one-fifth of full-time family planning administrative and consultative staff at the state and local levels. Nurses make up the bulk of such staff (45 percent at the state level, and 52 percent at the local level).

The 25 state programs reporting clinical services had 529 full-time clinical personnel employed (an average of about 20 per department), and another 861 part-time staff. Of the full-time staff, more than half were doctors (145) or nurses or nurse-midwives (286).

The 74 local programs reporting clinic services had 505 clinical personnel (about seven per department), and 347 of these (69 percent) were nurses.

Budget Data

Thirty-one of the 44 state health departments with family planning, and 46 of the 75 local health departments reported complete budget data, according to Dr. Wallace. The state health departments reported budgeting a total of $35.8 million for family planning (about $1.2 million per state), and the local health departments reported budgeting about $19.4 million (about $422,000 per locality). Eighty-four percent of the funds budgeted for family planning came from the federal government (mostly project grants through the National Center for Family Planning Services), and the remainder came from state, local and voluntary contributions.

Forty-one percent of the state health departments with family planning programs reported needing more funds, and 30 percent reported needing more staff, as did 64 and 28 percent, respectively, of local health departments.

Thirty-eight of the 44 state health departments with family planning programs said that they conducted sex or family life education programs, as did 63 of the 75 state health departments. A similar proportion reported that they conducted evaluations of their family planning programs.

Smoking and High Blood Pressure Increase Stroke Risk Among Oral Contraceptive Users

Smoking and hypertension both increase the risk of developing stroke in a woman taking oral contraceptives, William M. O'Fallon, a statistician at the Duke University Medical School in Durham, N.C., reported. In addition, one form of estrogen used in the pill—estradiol—seems to involve a greater risk for thrombotic stroke (caused by a blood clot) than the other commonly used estrogen —mestranol. [The incidence of stroke among U. S. women of childbearing age in the general population is not known. One expert committee says that the incidence is "so low" below the age of 35 that it is considered zero for purposes of calculation. The absolute risk among pill users of thrombotic stroke is "extremely small," according to British investigator Dr. Martin P. Vessey. In the United Kingdom, he explained, of 100,000 women using the pill, 10 in a year will be admitted to a hospital because of a thrombotic stroke associated with pill use.] These findings are based on an analysis of data from 12 university medical centers gathered by the Collaborative Group for the Study of Stroke in Young Women; other of this group's findings have previously been reported in *Digest*. [See: "Stroke Risk Higher Among Pill Users," *Digest*, Vol. 2, No. 5, 1973, p. 12.]

Smoking appears to be a risk factor only for stroke caused by hemorrhage, O'Fallon noted, while high blood pressure increases the chance of a woman developing both thrombotic and hemorrhagic stroke. In addition, the effect of migraine headaches on risk of stroke was explored, but the results were somewhat "equivocal." When the stroke patients in the participating hospitals were compared with controls drawn from their own neighbors, an increased risk appeared to be present for women using oral contraceptives who reported two or more symptoms of migraine headaches over pill users without these symptoms. But when the cases were compared with controls drawn from women admitted to the hospitals for conditions other than stroke, no increase was seen.

For hypertension and migraine symptoms, the increased risk (over that caused by pill use itself) was at the level expected if each of these risk factors worked independently of the pill in influencing the development of stroke. If, for example, a pill user had three times the chance of having a stroke as did a nonuser, and a woman with moderately high blood pressure had twice the chance of having a stroke as a woman with normal blood pressure, then a pill user who was hypertensive would be expected to have six (three times two) times the risk of stroke as a nonuser with normal blood pressure.

While this held true for migraines and hypertension, smoking apparently combined with pill use to produce a risk even greater than that which might have been expected. Thus, among pill users, the risk of hemorrhagic (but not thrombotic) stroke rose with increasing smoking at a faster rate than among women who did not use oral contraceptives.

In fact, pill use may not increase the chance of having hemorrhagic stroke among nonsmokers. Further analyses of the data, O'Fallon noted, "support the conclusion that oral contraceptive use is a risk factor for hemorrhagic stroke only among smokers." In the original report by the Collaborative Group, it was noted that 74 percent of the women in the study who had strokes were at one time cigarette smokers, while this was true for only 43 percent of the controls.

Although the statistical evidence marked smoking as a risk factor, O'Fallon noted that this may be merely a reflection of a possible relationship between smoking and hypertension: If women with high blood pressure smoke more than those with normal blood pressure, then the statistical link between smoking and increased risk of stroke would be a reflection of the increased risk caused by hypertension, rather than any effect of smoking itself. Further analyses of the data will explore this question, O'Fallon said.

High blood pressure leads to extremely high risks of stroke. Severely hypertensive women (blood pressure greater than 180/110) who did not use the pill had seven times the risk of developing thrombotic stroke and 20 times the risk of developing hemorrhagic stroke than women with normal blood pressure. But among pill users, severely hypertensive women had 22 times the risk of developing thrombotic stroke and 45 times the risk of developing hemorrhagic stroke as nonusers with normal blood pressure.

When the type of estrogen used was investigated, it was found that women who took oral contraceptives containing mestranol had three times the risk of thrombotic stroke as did nonusers. But women using pills that contained estradiol had from five to 12 times the risk of thrombotic stroke as did nonusers (when compared with two different groups of controls). While this range makes conclusions difficult, O'Fallon said, "there is an indication, which we cannot completely explain away, that estradiol produces a higher relative risk [of having a thrombotic stroke] than mestranol."

This finding differs from that reported by W. H. Inman in the *British Medical Bulletin* in 1970. He studied all thromboembolic events in oral contraceptive users reported to Britain's Committee on Safety of Drugs from 1964 through 1966, at which time 52 percent of oral contraceptives sold in Britain contained mestranol. He found that for all types of thromboembolic events except coronary thrombosis, a significantly greater proportion of the women used mestranol preparations than used estradiol combinations.

Family Planning Tied To Infant Survival

Reproductive efficiency — measured by the number of pregnancies needed to produce 100 normal children — may be markedly improved by proper timing of births, better medical care, including family planning and prenatal care, and improved socioeconomic conditions, according to a report by Charlotte Muller and May Aisen of the City University of New York and Frederick S. Jaffe of the Center for Family Planning Program Development. Using data from a National Natality Survey (NNS) conducted by the National Center for Health Statistics and from a study by the Health Insurance Plan of Greater New York (HIP, a prepaid group health plan), they estimated that without accounting for induced abortion, "more than 124 pregnancies are needed to realize 100 normal children." They expressed the opinion that "If timing [of births], medical care

and socioeconomic conditions had been optimal, only 114 pregnancies [the lowest rates reported] would have been needed. . . ."

From the sample data available, incidence rates were calculated for events such as congenital abnormalities (which occurred in 0.6 percent of the 10,395 births included in the 1964-1966 NNS), low birth weight infants (6.8 percent of the NNS sample), fetal deaths (10.6 percent of all 33,152 pregnancies reported by the mothers in the NNS), and infant deaths (reported by these mothers). Altogether, 6,469 of 33,152 pregnancies had one of these "adverse outcomes." By taking the ratio of all pregnancies to the number of "net 'good' births," Muller and her colleagues concluded that 124.2 pregnancies were required to achieve 100 "good" births.

Induced abortion was not included in the analysis, since the data were gathered at a time when abortion was generally illegal, and so accurate data were not available.

In order to calculate the "optimum" efficiency, the lowest rates for each of the adverse outcomes were found from the samples available. The lowest fetal death rate, 5.92 percent, was reported by 20-29-year-old mothers in the HIP survey; the lowest rate of congenital abnormalities, 0.46 percent, was noted among mothers of the same age in the NNS; the lowest rate of low birth weight infants, 5.7 percent, was reported by HIP mothers aged 30-34; and the lowest infant death rate was that for NNS mothers aged 15-19, 0.8 percent. With these "optimum" rates for adverse pregnancy outcomes, only 114 pregnancies would be needed to produce 100 normal children.

In evaluating reproductive efficiency, the authors noted, "one is evaluating the human and social resources involved in achieving family size goals under different social conditions. The concept of reproductive efficiency should be useful in interpreting the effectiveness of medical care in achieving safe pregnancies, and in understanding the potential of voluntary timing of births to take advantage of the age of pregnancy that is best in terms of risk to mother and infant and the economic and personal situation of the couple." It may also be useful for "the planning of health service and appropriate financial coverage related to fertility for women in the labor force."

The investigators observed that poverty status had some obvious associations with adverse pregnancy outcomes: women from families with incomes below the federal poverty level (now about $4,200 for an urban family of four) had the highest rates for congenital abnormalities, low birth weight infants, stillbirths and child deaths. But between 100 and 200 percent of poverty, there were some "puzzling" observations — the incidence of these adverse outcomes did not clearly decrease with increasing income for this group, and many fluctuations were seen. "These groups may need carefully designed programs," they observed, "to help make more of their pregnancies 'good' ones — perhaps they fall between eligibility for public programs and capacity to finance private care. To the extent that medical care affects pregnancy outcome, this may be a neglected group."

Firm Position Taken On Informed Consent

The APHA's 201-member Governing Council approved three resolutions of special interest to the family planning field. One favors federal regulation of all medical devices; the second opposes involuntary sterilization; the third defines abortion as a personal health service to be made available to all women "without financial barriers," and recommends that it be regarded as a "regular part of medical practice . . . subject to the same regulatory and administrative controls as other medical practices." The resolutions are now official policy of the organization.

Noting that some 1,500 manufacturers "produce 12,000 kinds of medical devices, most of which lack adequate control," and that "utilization of these devices frequently depends entirely on the information distributed by the retailer . . . ," the APHA called upon its own committees and boards "to develop some necessary guidelines which could be used as a basis for the regulation of medical devices."

At present, IUDs with active components such as copper or progesterone are regulated by the Food and Drug Administration; those without these additions are not regulated.

On the question of involuntary sterilization, the organization took an unequivocal stand in opposition, declaring that:

- "sterilization of persons who are minors and/or legally and/or mentally unable to give voluntary and informed consent should be forbidden";
- "consent from persons who are given a choice of sterilization or denial of health and welfare benefits or [are] threatened with harsher punitive measures shall be considered involuntary under all circumstances."

The organization took the position that "a full range of family planning services, with one alternative being sterilization, should be made available to all including the poor." Sterilization becomes "highly objectionable," however, "when performed upon persons who, for whatever reason, cannot consent or who do not understand the consequences of consent" when the decision is made for them by others. The resolution went on to say that when "sterilization is performed upon persons who understand the consequences, but have given 'consent' because it is the precondition of receiving health or welfare benefits or of receiving less punitive sanctions (such as with prisoners receiving a lesser sentence), the choice is not voluntary."

In its abortion resolution, the APHA declared that "patients and health care providers should address every effort to full implementation of the decisions of the United States Supreme Court, in order to make safe, high-quality, and dignified abortion care available when needed, *without financial barriers*." The APHA also recommended that any regulation of abortion services be made solely to preserve and protect maternal health in accordance with the Supreme Court's decisions of January 22, 1973 and such "regulation should be accomplished by existing administrative procedures without the enactment of new legislation."

Sources

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C. Muller, M. Aisen and F. S. Jaffe, "Measures of Reproductive Efficiency: The National Natality Survey, 1964-1966";

W. M. O'Fallon, "Oral Contraceptives and Stroke II: The Role of Risk Factors";

L. M. Okada and G. Sparer, "Is There a Need for Public Assistance in Family Planning?";

S. D. Targum and N. H. Wright, "Association of the Intrauterine Device and Pelvic Inflammatory Disease: A Retrospective Pilot Study";

D. Vaughan and G. Sparer, "Demographic Characteristics of Sterilization Patients Reported to the National Reporting System for Family Planning Services in 1972: A Preliminary Analysis";

H. M. Wallace, H. Goldstein, A. Hexter, E. M. Gold and A. C. Oglesby, "Administrative Relationships Between Maternal and Child Health Programs and Family Planning Programs in Health Departments — 1973."

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- "Abortion Is a Personal Health Service";
- "Involuntary Sterilization"; and
- "Medical Devices."

Other Sources

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Resources in Review

By Dorothy L. Millstone

The earlier couples learn to use contraception effectively, the more successful they are likely to be in achieving the family size they desire. This fact lends special significance to efforts to teach young people about family planning well before they actually begin to have a family.

Teacher Education

● The New York City Board of Education's inservice training program for teachers, *Living, Learning, Loving* (1973), presents teaching methods easily adapted for units on human sexuality in grades kindergarten through 12. One of 14 half-hour video tapes, all made for educational or closed-circuit TV, demonstrates how family planning can be taught in high school.

A real-life lesson, with Elizabeth Roman, a Planned Parenthood of New York City clinic director and registered nurse, doing the teaching, is recorded on film. Mrs. Roman has birth control samples on display as she opens the class. Her manner is informal and friendly; she probes for questions and answers them. She does not lecture. In this particular session with older high school students, the students' questions center on the pill and the intrauterine device (IUD), but in a brief postclass exchange with a teacher who introduces and concludes the class, she explains that in other schools questions move in many other directions.

The "Conception Control" program is ninth in the 14-unit series and by the time it is reached, much emphasis has already been placed in earlier segments on responsible decision-making concerning sex. Other units in the film series are entitled: "Human Sexuality," "Developing Curriculum," "In the Beginning," "Who am I?" "What Is Love," "Value Clarification," "The Difference Between Boys and Girls," "Preparing for the New Baby," "Introducing Human Reproduction," "Venereal Disease Education," "Pre-Adolescent Changes," "Kindergarten: A Positive Self Image," and "Homosexuality."

In New York City, the films are used in connection with elective courses for teachers which meet one hour a week for 15 weeks. At each meeting a half-hour is devoted to the film and a half-hour to study and discussion. The final session is devoted to evaluation.

A teacher's manual prepared for the series touches high points in each unit, suggests questions for workshop discussion and provides reference materials. The references included in the conception control unit are inadequate, and teachers will have to consult a bibliography.

A free copy of the teacher's manual may be obtained by writing Maude Parker, Coordinator, Bureau for Health and Physical Education, 300 W. 43rd St., New York, N.Y. 10036. The TV series is also available at courtesy rates for school systems and educational TV. Send inquiries to Dr. Florence M. Monroe, Assistant Administrative Director, WNYE-TV, 112 Tillary St., Brooklyn, N.Y. 11201.

● Another teaching resource of value is the film strip, *How Many Children Do You Want?*, which consists of three 13-minute color film segments with narration on long-playing records. The physiology of reproduction, birth control methods and sterilization are the principal topics covered. For maximum effectiveness, this should be used manually so that a counselor or teacher could respond to questions, and student-teacher exchanges could be accommodated in the right time slot. Used this way, it could be a serviceable educational item in clinics, secondary school classes and community health programs. Automatic projection is also possible but is not recommended by this reviewer. The pictures in much of this film strip are more illustrative and eye-pleasing than directly educational. The teaching method is question and answer, repetition and review, followed by summary. It is a method honored in pedagogic tradition, but interruption may help rather than hinder learning.

Available from Educational Materials Unit, Carolina Population Center, 214 W. Cameron Ave., Chapel Hill, N.C. 27514. A free preview is offered. The cost is $15 for each unit separately, $45 for the three.

● With the assistance of the Population Council, the Center for War/Peace Studies has prepared a teacher's guide to population education, *Teaching About Population* (1973), which offers still another classroom approach. As the title indicates, the focus is on demography and the impact of population changes on the quality of life. Fertility regulation is considered in the framework of population trends; no specifics on family planning methods are presented. But the subject of family planning arises frequently.

Of special value in the 72-page booklet is a teaching unit which identifies population problems, provides demographic tools for their analysis, and lists questions and activities adaptable to lesson plans. Seven case studies, supported by relevant statistics, charts, and issues for analysis, discussion and role-playing, are detailed. Organizational resources are listed and there is a bibliography of classroom and student reading materials, general background literature, and selected books, articles and reprints about population education.

Two other essays place the teaching unit in perspective. An introductory note by Stephen Viederman, Assistant Director of the Population Council's Demographic Division, points out that population problems are a subject of great national and international concern requiring citizen understanding as a precondition for evaluating policy. "Taught in the schools as a phenomenon to be understood, and not as a problem to be solved, population education need not be more sensitive than other areas," Viederman observes.

Sloan R. Wayland, professor at Columbia University's Teachers College, a specialist in population education, examines the knowledge base, the students, the teachers, the school system and its curriculum, and the community context.

Teaching About Population is No. 72 in the Intercom publications of the Center for War/Peace Studies (not to be confused with *Intercom*, the newsletter, published by Population Services International and reviewed in *Digest*, Vol. 3, No. 1, 1974).

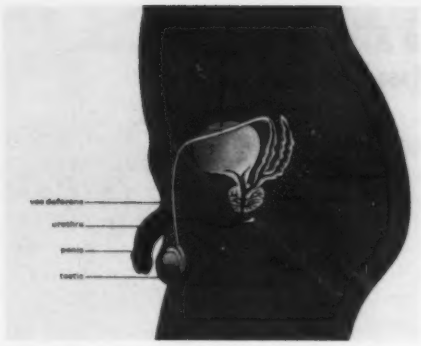
Single copies cost $1.50. Teachers are permitted — and, in fact, encouraged — to duplicate pages for student or seminar use. Quantities of 15 or more for classroom use are available at 50¢ each. Address orders to Intercom, 218 East 18th St., New York, N.Y. 10003.

For College Students

College campuses, which already have produced more than a dozen sex and family planning manuals for the undergraduate, are the source of three interesting items.

● A comfortable tone, free of the uneasy wisecracks that marked many of its predecessors, marks *Amatis* (5½" x 8½", 1972), a college-bound handbook on sexuality, contraception and related matters, published by the Planned Parenthood League of Massachusetts. The subjects covered include: anatomy and reproduction; infections of the sex organs, including VD; modern methods of contraception; possible future methods now under investigation in laboratories, and sterilization. A final section identifies and replies to questions often put by college students. Brandeis University and M.I.T. paid this 41-page booklet the compliment of distributing it on campus. Each added a cover and title of its own (the original title, *Amatis*, is Latin for 'you love'). This resource was designed to meet special Massachusetts needs, and replies to some questions and referral information apply only to that state. Hence, some revision would be needed for out-of-state use.

Digest readers can obtain a copy by writing the Planned Parenthood League, 93 Union St., Newton Centre, Mass. 02159. A



Illustrations from IPPF booklet, Family Planning, A Guide to Methods.

new edition is planned. Its title has not yet been fixed but it won't be *Amatis*. Brandeis called it *Sex and Sexuality* and at M.I.T. its name was *Just Sex*.

● *Sex in a Plain Brown Wrapper* (32 pp., 8¼″ x 11″, 1973), is the creation of Syracuse University students in cooperation with the College for Human Development and the University Student Health Service.

Witty cartoons and anatomical charts illustrate this brown-covered publication on newsprint. The text is generally straightforward and factual, but some of the art's high spirit spills over into the presentation of the information. For example, moving toward a formulation defining how to choose a suitable family planning method, the editors box in bold the statement: "Promiscuity. Nobody really knows what this word means."

The content is far-ranging. Brief paragraphs deal with fear and guilt in sex, homosexuality, the double standard, penis and breast size, and masturbation, for example — a variety which may be responsive to students' unexpressed questions. While the idiom is colloquial, the information is sound. Major sections are devoted to the physiology of reproduction, birth control, abortion, venereal disease, questions most asked by college students (with answers) and an outline of what to expect in a gynecological examination. The booklet is localized to Syracuse University.

The booklet is free to Syracuse University students, and $1 a copy to everybody else. Address Edu-Press, Syracuse University, 760 Ostrom Ave., Syracuse, N.Y. 13210 for samples and information.

● *A Sperm and Egg Handbook*, (30 pp., 5½″ x 8½″, 1973), published by a student corporation of the State University of New York at Buffalo was written by medical students Wayne and Bruce Middendorf, and is partially adapted from a California student manual.

Vocabulary and anatomical art, as distinguished from the Syracuse product, approach the traditional textbook level although laymen and some high school students could probably understand and use it without difficulty. In the college manual tradition, content includes reproduction, contraception (all the methods, including those "not recommended"), sterilization, pregnancy, abortion and venereal disease. The material on contraception is unusually good. The reader is explicitly informed about symptoms that could alert her to serious side effects. The reasons pills should not be borrowed or loaned are convincingly set forth. Minipills were still experimental when this was published; hence they are erroneously described as "not on the market." Instruction on the IUD and diaphragm is noteworthy. A future edition could make improvements. For example, substituting the National Fertility Study failure rates associated with the various contraceptives would come closer to their relative effectiveness in actual use.

Digest readers may obtain a free sample by writing Ms. Lynn Gottlieb, Box 32, Norton Hall, Room 343, University of Buffalo, Buffalo, N.Y. 14214. Single copies cost 20¢. Quantities of 100 or more cost 15¢ each plus mailing costs.

For Professionals

● *Systemic Contraception* (82 pp., 5¾″ x 8¼″, 1973), provides an updated survey of knowledge concerning the actions, side effects and clinical use of steroids. This authoritative International Planned Parenthood Federation (IPPF) resource expands and brings up to date Chapter 2 of the third edition of the IPPF *Medical Handbook*. Its comprehensiveness, brevity and organization commend it highly to the attention of family planning professionals, especially doctors. Scientific facts are presented and clinical implications of available data are stressed. The book reviews history and types of systemic contraceptives, physiology of the menstrual cycle and conception, pharmacology of the contraceptive steroids, mode of action, the effects of systemic contraceptives and their distribution and supervision. The bibliography is of exceptional value by itself.

● *Male and Female Sterilization* (40 pp., 5¾″ x 8¼″, 1973), a companion IPPF volume, condenses and organizes the findings of a panel of experts who examined all aspects of modern sterilization in January 1973. Assembled here are their assessments of methods, cost, convenience and safety, and recommendations to guide those considering establishing programs.

Subject matter covered includes: conclusions and recommendations of the panel, the role of sterilization in fertility control, comparative advantages and disadvantages of male and female sterilization, biological side effects, psychological and social aspects, surgical approaches to the uterine tubes, division and occlusion of the tubes, male sterilization procedures, reversibility, postoperative medical and nursing supervision, training of personnel in sterilization and nondoctor health personnel. This, too, is recommended as a standard part of any family planning professional's resources.

The books are part of an IPPF professional series. [Three earlier companion volumes have been reviewed in *Digest: Intrauterine Contraception* and *Abortion — Classification and Techniques*, Vol. I, No. 4, 1972 and *Vasectomy*, Vol. 2, No. 2, 1973.]

The price of *Systemic Contraception* is $2 plus postage by air or surface mail. *Male and Female Sterilization* costs $1 plus postage. Both appear in English, French and Spanish. Order from IPPF, 18-20 Lower Regent St., London, SW1Y 4PW, England.

● Another useful publication from the same source is *Family Planning, A Guide to Methods* (1973), intended for direct use by field workers in family planning and by those working in the broader area of health and social service. However, this attractive, lavishly illustrated 28-page booklet could be used effectively in a training course — if care is taken to explain some Anglicisms. (One example is the role of midwives; another is the term "cap" for diaphragm.) In addition to method information, which is presented mainly through questions and answers, there is a section dealing with "common misconceptions" and how to dispel them. The vocabulary and general reading level of this booklet may be at a higher level than customary for U.S. field workers, but it would be worth investigating to see if it is suitable.

For one free sample, write IPPF's Information and Education Department at the address given above. For up to 10 copies, the price is 36¢ each, bulk orders earn discounts.

Note — Readers are urged to send their own materials for review. Send two copies of each item; define the intended audience and goal; state the price and how *Digest* readers may obtain copies. Contributions should be addressed to:

Resources in Review
Family Planning Digest
Room 12A-27
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Oral Contraceptives

Irregular Menses Before Starting Pill Are Linked to Postpill Amenorrhea

A large proportion of women who develop amenorrhea (absence of menstruation) and anovulation following discontinuation of oral contraceptive use had abnormal menstrual cycles prior to taking the pill, according to recent reports from the United States, England and Australia. The investigators suggest that women with a history of irregular menstruation may be more susceptible to postpill amenorrhea, and that the pill should be prescribed with caution for such women.

Researchers from Middlesex Hospital and the Margaret Pyke Center for the Study of Family Planning, both in London, report in the *British Medical Journal* that 63 (30 percent) of 210 women seen with secondary amenorrhea of at least six months' duration at Middlesex Hospital developed the condition after stopping oral contraceptive use. (Secondary amenorrhea is amenorrhea that develops after menstruation has been established.) Forty of these women (63 percent) reported having irregular menstrual cycles before beginning pill use, including 19 who had previously suffered from amenorrhea. Five women "had organic disease sufficient to account for the amenorrhea," including diabetes, premature ovarian failure and a pituitary tumor, according to the investigators. Eight women in the group did not menstruate until they were 16 or older.

This high proportion of women with an abnormal menstrual history suggests "that combined estrogen-progestogen oral contraceptives should be used with caution for women with irregular menstruation," the investigators stated. "It is desirable to identify women who may have a higher risk of amenorrhea after taking oral contraceptives, so that they may be warned of the possibility," they added. "The presence in our series of eight women who did not menstruate until after they were 16 is noteworthy and a late menarche may suggest caution in prescribing the pill."

Of the 63 cases of postpill amenorrhea, 19 women requested therapy in order to become pregnant. They were all treated with a fertility drug, but 10 did not respond to the therapy; seven became pregnant and two ovulated but did not become pregnant while under treatment. Six of the 10 who did not respond were later treated with human gonadotrophins (hormones that stimulate the gonads), and all resumed ovulation; five of the women became pregnant.

The group also studied 204 women who stopped oral contraceptive use to determine how long it would take before they resumed menstruation. While 74 women (36 percent) had a first cycle longer than five weeks, only five took three months or longer to begin menstruating and one had more than six months' amenorrhea. "The low incidence of amenorrhea is reassuring in view of the many patients now taking oral contraceptives," the researchers noted. "The fact that it occurs at all . . . is worrying to patients, and gynecologists and endocrinologists are seeing more patients in this category."

A group of researchers from the Baylor College of Medicine in Texas reported at the 1973 North American Conference on Fertility and Sterility on their experience with 39 women who had postpill amenorrhea. Twenty of the 39 women had a history of prolonged menstrual cycles (eight menstruated every 35-46 days and 12 every 45-180 days). Twenty-three of the women had never been pregnant, and another 10 had only one prior pregnancy. Of 30 prior pregnancies in the group, 13 had ended in miscarriage. Pill use averaged 29 months, ranging from six months to seven years. Menstruation began spontaneously for two patients after they had been examined but before treatment.

Prior History Found

The investigators also reviewed the medical literature on postpill amenorrhea and found that 37.3 percent of 271 reported cases had a prior history of irregular menses. They noted that another researcher had estimated the incidence of irregular menstruation and amenorrhea in the general population of women of reproductive age as 17 percent. "If this . . . figure is indeed correct for all women," they commented, "these data would suggest that a female with an irregular menstrual history is more susceptible to developing postdrug amenorrhea."

They theorized that irregular menstruation is a sign that the interaction between the ovaries and the hypothalamic and pituitary glands "has not matured . . . completely." In such a case, they suggested, a woman "would be more susceptible to developing" oversuppression of this system by oral contraceptives than a woman in whom this system of interactions is mature. They noted, however, that "this theory will not answer the question as to why some females who menstruate regularly or who have had children also develop postdrug amenorrhea."

Because these observations suggest that women in whom regular menstruation has not been established may be more susceptible to this condition, the investigators recommend that "the young female with a history of irregular menses . . . stay on the medication for as short a period as is feasible and certainly not more than one year."

Dr. Alan Grant of the Women's Hospital in Sydney, Australia, in a paper in the *International Journal of Fertility*, reported that 750 of 894 women seeking treatment for infertility had at one time taken oral contraceptives. Sixty-eight of these women (nine percent) had amenorrhea for one year or longer, and 33 of these had a history of irregular periods and/or late menarche. While nine percent of the pill users seeking infertility therapy had amenorrhea, only four percent of the other 144 women reported amenorrhea of 12 months or more.

Fifty of the 68 women with postpill amenorrhea underwent treatment with a fertility drug; two-thirds (33) became pregnant, but 11 of the pregnancies ended in spontaneous abortion, so that only 22 of the women had a live birth. "These investigations suggest," Grant observed, "that the oral contraceptives have introduced another infertility problem which is not easy to cure if the criterion of success is the birth of a live baby."

Another investigator, however, has come to a different conclusion about the relationship between a prior history of irregular menstruation and postpill amenorrhea. Capt. Andrew Good, of Cutler Army Hospital at Fort Devens, Massachusetts, reported at the 1973 annual meeting of the Armed Forces District of the American College of Obstetricians and Gynecologists on a review of 1,300 cases of amenorrhea diagnosed at the Mayo Clinic since 1960, which included 12 cases of postpill amenorrhea. Irregular menses before starting pill use was reported by only four of the women. "This suggests that the antecedent menstrual history may not be so helpful as it once was thought in identifying the individual who will develop this syndrome," he said.

Sources

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A. E. Good and R. D. Kempers, "Prolonged Oversuppression Syndrome," paper presented at the annual meeting of the Armed Forces District of the American College of Obstetricians and Gynecologists, Las Vegas, Nev., Sept., 16-21, 1973.

A. Grant, "Infertility Due to Anovulation Before and After the 'Pill Era'," *International Journal of Fertility*, **18**:44, 1973.

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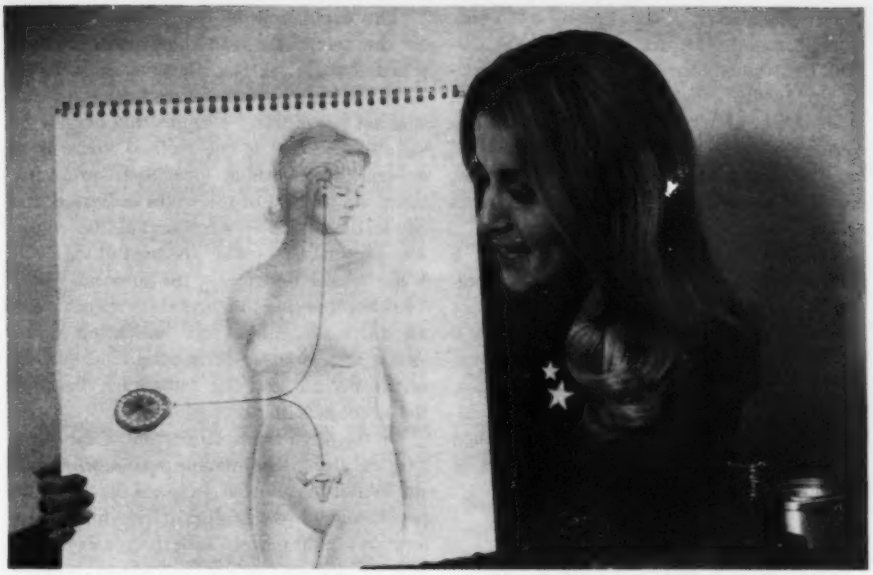
Orals

Ways to Reduce Skin Side Effects

Dermatological side effects of oral contraceptives can be minimized by careful selection of the pill with an appropriate combination



of estrogen and progestogen. Dr. Howard G. McQuarrie of the Western Gynecological and Obstetrical Clinic in Salt Lake City, Utah, made this assertion in a paper presented at the 1973 annual meeting of the American Medical Association in New York City.

For a woman who has acne or develops it while on the pill, the physician recommends an oral contraceptive that is strongly estrogenic—one in which the progestogen also has an estrogenic effect. A combination pill with a progestogen that may have an androgenic (masculinizing) effect, such as norethindrone, norgestrel or norethindrone acetate, or an estrogen-free pill, should be avoided.

Melasma, or darkening of the skin pigmentation, is another "common cosmetic nuisance" that can be caused by oral contraceptives. "Estrogen appears to stimulate the melanocytes (pigment-producing cells of the skin) to produce pigment," McQuarrie noted, "and this is intensified by sunlight." Thus, this problem is most often seen in the summer months. "If the patient is concerned, an indication for the lowest estrogen dosage or an estrogen-free minipill may be considered," he said. Melasma can also be caused by other factors, such as Vitamin B deficiency or by "the androgenic effect of some gestogens," and, therefore, a good rule of thumb is to use the lowest estrogen dosage to see if reducing the estrogenic effect will help.

As with acne, hirsutism (abnormal hairiness) is an indication to avoid pills containing hormones that have an androgenic effect. The oral contraceptive selected should have a progestogen with an estrogenic effect.

Although alopecia, or hair thinning, may be a "questionable" side effect of the pill, it may be difficult to rule out the pill as a factor, especially with formulations that are progestogen-dominant or totally estrogen-free, McQuarrie said. If hair thinning does develop, he recommends sequential or estrogen-dominant combined oral contraceptives.

Source

H. G. McQuarrie, "Gynecological and Dermatological Manifestations of the Pill," paper presented at the annual meeting of the American Medical Association, New York, N.Y., June 1973.

Pill
More Heart Attacks In High-Risk Users?

Oral contraceptive use may increase the risk of myocardial infarction (a form of heart attack) among women already at high risk because of such other factors as heavy smoking, obesity, high blood pressure or diabetic-like conditions, according to a report in the *British Medical Journal*. Six (27 percent) of 22 women aged 31-45 who were admitted to the coronary care unit of the Royal Infirmary in Edinburgh, Scotland, with acute myocardial infarction between January 1970 and December 1972 were pill users, reported Drs. Dorothy J. Radford and M. F. Oliver. Of the nine patients aged 40 or younger, five had been using oral contraceptives. Thus, the prevalence of pill use was twice as high for the younger patients (56 percent) as for the group as a whole (27 percent).

"Both these figures of prevalence of oral contraceptive use are significantly greater than estimates [made by the Royal College of General Practitioners] for the general population of women of similar age," the authors noted. The College estimated that eight percent of women aged 30-44 and 11 percent of women aged 30-39 are pill users.

The women were checked for "risk factors known to be associated with the early development of ischemic heart disease [due to blockage of a blood vessel]," which include high blood pressure, high serum cholesterol levels, smoking a pack or more of cigarettes a day, an abnormal glucose tolerance test (showing glucose metabolism similar to that seen in diabetics), a family history of heart disease, obesity, and premature menopause or bilateral oophorectomy (removal of both ovaries). All of the women had at least one of these predisposing factors (with an average of 2.6) and all those aged 40 or younger had at least two of these risk factors present (with an average of 2.7).

Among the 40-and-under group, duration of oral contraceptive use ranged from two to nine years, with an average of 5.6 years. The authors believe that "in young women already at risk for developing ischemic heart disease because of the presence of other factors it is possible that prolonged use of oral contraceptives becomes a progressively more important adverse influence." One of the younger pill users died, while none of the nonusers of the pill in this group died. The one oral contraceptive user older than 40 also died.

In view of these findings "it would be wise to identify those risk factors commonly associated with ischemic heart disease in young women about to start oral contraceptive therapy," the investigators concluded. "It is easy to screen for hypertension and to monitor blood pressure subsequently. In those with a family history of precocious ischemic heart disease a case can be made for screening for abnormalities in blood lipid [fat] concentrations and also for giving advice against cigarette smoking. In those with identifiable risk factors alternative contraceptive measures should be advised or, if personal circumstances demand, the duration of oral contraceptive use should be limited."

Source

D. J. Radford and M. F. Oliver, "Oral Contraceptives and Myocardial Infarction," *British Medical Journal*, **3**:428, 1973.

Birth Order
First Borns Show Higher Test Results

"Intellectual competence" appears to decline with increasing birth order and increasing family size, according to an analysis of military induction aptitude tests administered to almost 400,000 Dutch 19-year-old men—virtually all the males born in the Netherlands from 1944 through 1947 and still living there when they reached age 19. Drs. Lillian Belmont and Francis A. Marolla of the New York State Department of Mental Hygiene reported in *Science* that for each family size, first-born boys scored higher on the tests than all later born children. With few exceptions, there was a trend downward in the scores with increasing birth order.

These observations were not affected when the scores were analyzed separately for three social classes, classified by father's occupation (nonmanual, manual and farm worker). Of a total of 408,015 subjects, test scores (reduced to a six-point scale), family size and birth order were available for 386,114 men.

When birth order was controlled, the scores on the test—measuring nonverbal intelligence—fell with increasing family size (with the exception of only children).

Unlike the birth order results, the relationship between increasing family size and lowered test results did not always hold when the scores were analyzed for each social class separately. For men from the manual worker class, the only variation from the pattern was for only children, whose scores were lower than for individuals from two-child families. For those from the nonmanual class, men from one- and two-child families did not fit the pattern, with scores increasing up to the three-child level, and then falling off. Those from farm families did not follow the pattern. Decreasing scores with increasing family size in this group were only a reflection of the effect of birth order. The best scores were achieved by first-borns from eight-child families, followed by first-borns from six-, seven-, four- and five-child families, in that order.

While these effects "do not admit of a genetic explanation," the investigators suggest there may be one confounding factor involved: "One factor that may be relevant to differences in test score is educational level. Education might affect adult . . . scores, and if some kind of educational primogeniture is operative in the Netherlands, then effects of birth order may be an artifact of educational inequality."

Source

L. Belmont and F. A. Marolla, "Birth Order, Family Size and Intelligence," *Science*, **182**:1096, 1973.

Rhythm Method

Temperature Use Enhances Marital, Sexual Happiness Despite Psychological Stress

A study of 92 "highly selected, highly motivated" couples practicing the temperature-rhythm method of birth control indicated that those couples who successfully used the method had "a slight improvement in sexual and marital happiness" despite "the acknowledged psychological stress of periodic abstinence, especially for men, and the desire on the part of most couples [who used rhythm] to have more sexual intercourse."

The 76 couples (82.6 percent) who did not discontinue the method or have an unwanted pregnancy during the two years of the study were characterized as "more sexually conservative" than those couples who had a failure or dropped out of the study. These findings were included in a paper by Alexander Tolor and Frank J. Rice of Fairfield (Connecticut) University and Dr. Claude A. Lanctot of the University of Sherbrooke (Quebec) School of Medicine presented at the 1973 annual meeting of the American Psychological Association in Montreal.

The temperature-rhythm method, as practiced by the couples in this study, permits intercourse during two segments of the menstrual cycle. The "preovulatory, relatively infertile period" is calculated on a calendar basis according to the following formula: Subtract 19 days from the length of the shortest cycle during the past 12 months (21 days if data are available on only the previous six months, or 20 days if a failure rate of only five per 100 woman-years is desired). The resulting number is the last day of the cycle *before* ovulation on which intercourse is permitted. Resumption of intercourse *after* ovulation is determined by daily temperature measurements: The "postovulatory, infertile period" is considered to start after the wife records three consecutive high readings of basal (resting) body temperature above the highest reading of the preovulatory period.

All of the women and 94 percent of the men in the study were Catholics, and had practiced the temperature-rhythm method for an average of 4.9 years (including the two years of the study). Originally, 160 couples from throughout the United States (mainly from the East Coast) agreed to participate in the project, but only 92 completed the questionnaires and other forms sent them. To participate in the study, couples had to meet the following criteria: agreement to participate for two years, wife aged 20-44, fertility proven by at least one prior pregnancy of 28 weeks or more, and ability to chart at least one temperature cycle (two cycles in the event of a recent birth) and observe the prescribed abstinence.

For the 92 couples for whom data were analyzed, the husbands' average age was 35.0 and the wives' 32.2. The husbands had an average of three years and the wives an average of two years of college. Three in five husbands were accountants, teachers, engineers or executives; three in 10 were shopkeepers, salesmen, white-collar workers or skilled laborers.

Five different questionnaires were mailed to the couples and later analyzed: one dealing with sexual behavior, one measuring attitudes toward sex, another evaluating reaction to the temperature-rhythm method, and two psychological scales.

The evaluation of the couples' reaction to the temperature-rhythm method "indicated that, in general, these procedures resulted in a slight improvement in sexual and marital happiness." Despite this overall favorable reaction to the method, there were several areas which presented problems. Some 63 percent of the wives indicated that the fertile period — when sexual intercourse was proscribed — was "the part of the cycle when sexual desire was the greatest," with 19 percent saying the time of the month made no difference, 14 percent indicating sexual desire was greatest during the relatively infertile period, and the remainder choosing the absolutely infertile period.

On the other hand, 49 percent of the wives said the absolutely infertile period, when sexual activity is allowed, induced the "greatest psychological discomfort (irritability and anxiety)"; 20 percent said there was no difference from one part of the cycle to another; 23 percent reported the fertile period caused the greatest discomfort; and eight percent picked the relatively infertile period.

In addition, 43 percent of the wives "indicated they had the least interest in sex during the absolutely infertile period," while 69 percent of the wives and 73 percent of the husbands said they would like more frequent sexual intercourse. Some 43 percent of the men and 56 percent of the women said that sexual abstinence was "relatively difficult," while 45 percent of the husbands and 24 percent of the wives said it was "almost always difficult."

Why then, with these unfavorable reactions, was there an overall positive response by these couples to the temperature-rhythm method? The "most likely explanation," Tolor told *Digest*, is that the couples were so highly motivated to make the method work that the "acknowledged discomfort, anxiety and desire for more sexual intercourse [were] overshadowed" by the desire to succeed with a method religiously and ethically acceptable to them.

In order to determine any differences between the couples who were successful with the method and the 10 couples who discontinued it or the six who had an unwanted pregnancy, the investigators examined the two questionnaires dealing with attitudes toward sex and reaction to the temperature-rhythm method. They found statistically significant differences, with the successful group attributing greater benefits to the method and being more conservative in their sexual attitudes than the others.

Sources

A. Tolor, F. J. Rice and C. A. Lanctot, "Characteristics of Couples Practicing the Temperature-Rhythm Method of Birth Control," paper presented at the annual meeting of the American Psychological Association, Montreal, Aug. 28, 1973.

A. Tolor, personal communication.

IUDs

Length of Uterus Affects Retention

The importance of sounding the uterus before inserting an IUD was emphasized in a report in the *Journal of Reproductive Medicine* correlating uterine length with continuation rates. The shorter a woman's uterus the more likely she is to expel a device, have a difficult insertion or have severe cramps after insertion, and the less likely she is to continue using the device — especially among multiparous women — according to Yair Gibor and his associates at Searle Laboratories.

Although their data were based on insertions of only one device — the Copper 7 (Cu-7) — in 3,300 women, the authors "assumed that this relationship also obtains in the case of other IUDs."

Uterine soundings were taken for all 3,300 patients who had Cu-7s inserted at 90 different clinics throughout the world between December 1970 and March 1971. For the purpose of analysis, the women were divided into three groups according to uterine length: less than 6.5 cm (small), between 6.5 and 7.49 cm (medium), and 7.5 cm or more (large).

In all categories of discontinuation — removals, expulsions and involuntary pregnancies — as well as instances of difficult insertions and cramping after insertion, the highest rates were recorded by the group with the smallest uteri, and the lowest rates by the women with the greatest uterine length. Many, though not all, differences were statistically significant. Comparing those who had 'small' and 'medium' sized uteri, statistically significant differences were noted for difficulty of insertion, cramping, partial expulsion, all expulsions, and total discontinuations. Comparing the 'medium' with the 'large' group, significant differences were observed for removals and total discontinuations.

Since parity is related to uterine size, comparisons were made for different parity levels between women who expelled the Cu-7 and those who did not. The length effect was not seen among nulliparous women: The mean uterine length of those who expelled the device was actually greater than that of women who did not expel it (see Table 1). But for all other parity levels, women who expelled the device had shorter uteri than those who did not, with the difference reaching statistical significance for women of parity three or greater.

"We have two different effects working here," Gibor told *Digest*. For nulliparous women, the fact that they have *never* given birth is enough to put them at risk of expulsion. But with multiparae, the length of the uterus is the significant factor.

The investigators also examined the question of whether uterine sounding is necessary to determine uterine size, or whether an estimate of size made (without sounding) during a pelvic exam is sufficient. All women in the series were given a pelvic exam before sounding, and careful note was made of the estimated uterine size. For women with uteri shorter than 5.5 cm, in only 7.9 percent of the cases did the clinician identify the uterus as being "smaller than normal" by pelvic examination. In fact, in 3.5 percent of the cases the uterus was designated "larger than normal." Only 36.1 percent of women with uteri 8.5 cm or more in length were identified as having "larger than normal" uteri after the pelvic exam, the rest being classified as normal. "Therefore," the investigators note, "the diagnosis of the small uterus, which is really the problematic uterus, cannot be made without the sounding procedure."

A possible factor leading to the higher event rates among women with small uteri is "inadequate sounding," when the uterus is longer than the actual measurement. In such cases, the authors observe, the IUD does not reach the fundus (the part of the uterus above the openings of the fallopian tubes) when inserted, and such incomplete insertions could contribute to the higher rates of partial expulsion and involuntary pregnancy.

Table 1. Mean uterine length of women expelling the Cu-7 and those not expelling the device, by parity

Parity	*Expellers*		*Nonexpellers*	
	No. of patients	*Mean uterine length (cm)*	*No. of patients*	*Mean uterine length (cm)*
0	53	6.93	657	6.57
1	57	7.07	805	7.13
2	38	6.92	814	7.26
≥3	27	6.70	849	7.27

Sources

Y. Gibor, L. Deysach and C. H. Nissen, "Uterine Length: A Prognostic Indicator for the Successful Use of the Copper 7 Intrauterine Device," *Journal of Reproductive Medicine*, **11**:205, 1973.

Y. Gibor, personal communication.

IUD Removal May Avert Miscarriages

Pregnancies that occur with an IUD in place are more likely to end in spontaneous abortion if the IUD is left in the uterus than if the device is removed, according to a report in *Obstetrics and Gynecology*. Gregorio T. Alvior, Jr., now with the Jamaica Hospital and the Catholic Medical Center of St. John's Hospital in New York City, studied 201 patients in Manila between September 1969 and November 1971 who became pregnant while wearing a Lippes loop. In 81 patients, the IUD was removed; 29.6 percent of these women aborted spontaneously before the 20th week of gestation. In 120 patients, the IUD was left in place, and 48.3 percent of these pregnancies resulted in an abortion. Women were randomly assigned to the two groups.

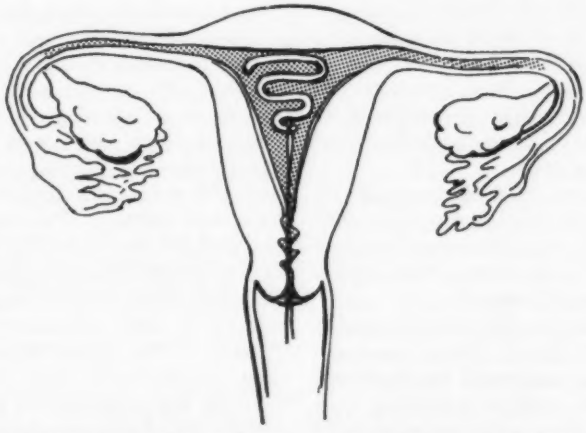
The device was removed, according to the physician, only if the thread for removal was still visible at the cervical os, if the woman was in her first trimester of pregnancy, and if there was no appreciable resistance when removal was first attempted.

Other investigators have previously suggested that there is a greater chance of spontaneous abortion if an IUD is left in place. Sarah Lewit of the Population Council has reported that if an attempt is made to manipulate or remove a tailless IUD, the risk of abortion increases sharply. No such removals were attempted in the Manila study.

Sources

G. T. Alvior, Jr., "Pregnancy Outcome with Removal of Intrauterine Device," *Obstetrics and Gynecology*, **41**:894, 1973.

S. Lewit, "Outcome of Pregnancy with Intrauterine Device," *Contraception*, **2**:47, 1970.



Lippes loop in place in uterine cavity. Uterine length affects effectiveness of IUDs.

Postvasectomy

Men Report More Complications than MDs; Recanalization Sometimes Found to Occur

Men who have had vasectomies report more complications following the procedure than physicians report, but most of the complications appear to be minor and the men are, on the whole, satisfied with the procedure, according to a recent report from New York. A similar proportion of patients reported postoperative complications in a London study, which also found that recanalization occurred in two percent of the men, unintentionally restoring their fertility.

Questionnaires were sent a year or more after their operation to the first 1,056 men who had a vasectomy at the Margaret Sanger Research Bureau in New York between October 1969 and December 1971, according to Dr. Aquiles J. Sobrero and K. L. Kohli in a report at the 1973 annual meeting of the American Public Health Association. Of the 822 men who responded, 54 percent reported no postoperative complications and 20 percent noted complaints that disappeared within one week — complications which "could be interpreted as part of the normal healing process."

The remaining 26 percent of the men reported more persistent complaints, some lasting six months or more (although only five percent continued beyond two months). In nearly half of this group there were specific complaints, including infection, small hematomas (swollen areas filled with blood), heavy oozing and inflammation of the epididymis. The other men noted "subjective" complaints — pain and swelling, alone or in combination.

Although all of the vasectomies were performed on Fridays in order to give the men a weekend to recover from the operation, 28 percent of the patients reported losing time from work — 19 percent lost one or two days, and the rest three or more.

Previous large-scale studies, the investigators noted, reported postoperative complication rates of no more than four percent. "However, it may be pointed out," they said, "that the findings of earlier studies are based on reports by physicians rather than by the patients, and thus the low morbidity rate in those studies may be due to more restrictive definition of complications by physicians." The high percentage of patients reporting complications lasting more than one week and the similar percentage losing time at work "suggest that further research should be considered regarding surgical techniques and postoperative care."

The team of investigators associated with the Margaret Pyke Center in London reported in the *British Medical Journal* on their experience with 1,000 consecutive vasectomies (performed between July 1971 and October 1972). Questionnaires were sent to 460 patients one year after the operation to assess their reactions to the procedure; 271 responded. Of these, 59 (22 percent) reported "minor local complications more than one month after the operation." Complications noted by the physicians at the time of the operation occurred in 72 of the 1,000 cases; in 122 cases complications were reported on examination about a month after the vasectomy.

In both the London and New York series, the bulk of the complications were minor, and a large majority of the men reacted favorably to the procedure. In the New York City group, "nearly two-thirds of the respondents [to the questionnaire] reported that enjoyment of sex was greater." The authors attributed this to "the absence of fear of having pregnancy." In the London group, 257 of the 271 men who replied to the questionnaire said they "were glad vasectomy had been done," five were "sorry," eight were uncertain, and one did not answer the question.

One problem noted by the London investigators, not reported among the Margaret Sanger patients, was recanalization — creation of a channel connecting the severed ends of one vas deferens. This occurred in six patients (two percent of the respondents). Five men agreed to further surgery, and in all cases a sperm granuloma (an abscess due to sperm) was found between the severed ends of the vas; infertility was achieved after the second operation. The authors noted that "the eventual incidence may prove higher, since the complication has been reported as late as eight years after vasectomy." In this series, the ends of the vas were ligated (tied off) with black silk.

Granulomas occur when sperm leak out of the severed end of the vas nearest the testis. There are several possible causes for this leaking, according to California urologist Dr. Stanwood S. Schmidt in a report in *Fertility and Sterility*. Rarely, an infection or injury can cause leakage; more often, the key factor is incomplete obstruction of the end of the vas, or cutting through the walls of the vas by the ligature.

This abscess can grow, and eventually extend from one cut end of the vas to the other. If, in the process, a small channel develops through which sperm can pass, then fertility may unexpectedly be restored.

In many instances, Dr. Schmidt noted, a granuloma will develop without any symptoms to reveal its presence. Of 66 granulomas observed by the author (occurring from three weeks to 25 years after vasectomy), 23 were without symptoms, and were usually found during surgery for reanastomosis. Such asymptomatic sperm granulomas were found in 15 percent of operations to reconnect severed vasa performed by Dr. Schmidt in the past three years, "a clear evidence of their frequency after the average vasectomy."

One way to reduce the incidence of granulomas, he declared, is not to ligate the ends of the vas, but to use electrical fulguration instead (destruction of tissue with an electric spark) to destroy the lining of the vas and thereby seal it with a plug of scar tissue. A granuloma can also occur with this procedure, he pointed out, if too much of the vas is destroyed. Only the mucous lining should be fulgurized, he declared. "In our series," Dr. Schmidt said, "granulomas of the vas most commonly followed ligation of the cut ends of the vas, but several cases did follow fulguration. . . ."

Sources

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M. N. Barnes, J. P. Blandy, H. R. England, G. Gunn, G. Howard, B. Law, B. Mason, J. Medawar, C. Reynolds, R. J. Shearer, M. Singh and D. G. Stanley-Roose, "One Thousand Vasectomies," *British Medical Journal*, **4**:216, 1973.

Most Couples Prefer Boy as First Child

Most couples want their first child to be a boy, according to a sampling of opinion in one Florida city. Gerald E. Markle of Western Michigan University reported in a paper delivered at the annual meeting of the American Sociological Association that for all population groups surveyed in Tallahassee, those who wanted their first child to be a boy clearly outnumbered those who preferred a girl as their first child.

Questionnaires were sent to 1,000 people picked at random from the Tallahassee city directory. The investigator received 147 responses from individuals without children, 266 from people with at least one child who expected no more children, and 68 from subjects with at least one child who expected to have more children. (The third group was not analyzed because of the small number of respondents.) Markle had previously conducted a similar survey of students at three colleges in the Tallahassee area. [See: "Choice of Sex Might Mean Fewer Children," *Digest*, Vol. 1, No. 6, 1972, p. 13.]

In the college sample, 12 times as many respondents who expressed a preference said they wanted a boy for the first child as

wanted a girl. (One-third of all respondents had no preference.) In the general sample, those who wanted a boy outweighed those who wanted a girl by nearly 19 to 1. Men preferred boys to girls 42 to 1, and even the female respondents had a strong preference for a boy as their first child, with a ratio of 11 to 1. Boys were preferred by all groups, whatever their age, sex, marital status, ethnic group or religious affiliation, and whether or not they had siblings. Preference for a boy decreased with increasing education, however; those with a high school education or less preferred a male five to one, while the ratio went down to two to one among college-educated persons.

Among those with completed families (who were asked their preference "if you could have your family again"), the preference for boys over girls for the first child was much smaller, but still significant — a ratio of 3.5 to 1 among those with a preference.

Seventy-one percent of men whose first child had been a boy said that had been their preference. Only two percent said they would have preferred a girl. But a third of the men whose first child had been a girl said that was what they wanted; while another third said they would have preferred a boy. Among women whose first child was a boy, three-fourths said that was their choice for the first child, while six percent preferred a girl. But 35 percent of the women who had a girl first said they would have wanted a boy, and one-fourth said they wanted a girl. When all children were considered—not just the first—the preference was still for boys.

This preference for having a boy as the first child may be reduced if "egalitarian," rather than "traditional," views of sex roles gain more support, however, the investigator noted. The respondents were also asked several questions dealing with the roles of the sexes and their views were then classed as traditional, moderate or egalitarian. Markle reported that among those with no children, fewer than half of the individuals with an egalitarian view expressed a preference for having a boy first (although of those who expressed a preference, the boy/girl ratio was still large — 13.5 to 1); while those with traditional and moderate views had much greater preferences for a boy as the first child. Among those with completed families, the trend was similar.

Source

G. E. Markle, "Sexism and the Sex Ratio," paper presented at the annual meeting of the American Sociological Association, New York City, Aug. 27-30, 1973; a revised and expanded version of this paper appeared in *Demography*, *11*:131, 1974.

Credits

Pp. 1, 3, 6, 11: Ken Heyman; p. 4: Charles Harbutt, Magnum; p. 9: IPPF's *Family Planning, A Guide to Methods;* p. 13: IPPF's *Family Planning Handbook for Doctors;* p. 15: Don Guy.

30% of Illinois Clinic Patients Are Teens; Nearly Half Have Already Been Pregnant

Almost three out of 10 women seeking contraception for the first time from family planning clinics associated with the Illinois Family Planning Council in a recent eight-month period were teenagers; almost one-half of them had already been pregnant prior to coming to the clinics. More than half had never used contraception, although they were sexually active. These are some of the preliminary findings reported in the *Chicago Medical School Quarterly* by a team of investigators associated with the Illinois Family Planning Council.

According to the report, of a total of 57,477 women making initial visits to the family planning clinics between May and December 1972, 16,470 were teenagers. Eighty-two percent of them were aged 17-19, 12 percent were 16 years old, and the rest were aged 13-15. Fifty-eight percent of the teenagers were black, 39 percent were white; the remainder included girls with Spanish surnames, orientals and others. For all ethnic groups, older girls aged 17-19 represented the vast majority of those coming to the clinics. But the number of younger teenagers was not insubstantial: Almost 3,000 were aged 16 or younger.

Prior to coming to the family planning clinics for assistance, almost half the group (48 percent) had already been pregnant. The proportion of pregnancies rose as the age of the girls increased; thus, 22 percent of the 13-year-olds had been pregnant, and this almost doubled for the 15-year-olds, of whom 43 percent had been pregnant. More than half (52 percent) of the 19-year-olds had experienced a pregnancy. A substantially greater proportion of black than white teenagers had been pregnant at every age level.

About 54 percent of the white girls reported that they had used contraception prior to coming to the clinics for assistance, while 45 percent of the black teenagers said they had done so. Similar proportions of each group had used the pill, 33 and 37 percent, respectively, and the IUD, one percent of whites and two percent of blacks. The investigators did not gather information on the source or the frequency or consistency of use of any of the methods. The interest in contraception was high among the teenagers, as demonstrated by the fact that the percentage choosing the most effective method, the pill, was substantially higher after coming to the clinics than the proportion who used it previously: 70 percent of white girls and 76 percent of black girls selected this method at the clinic. Interest in the IUD also increased, with two percent of whites and four percent of blacks choosing this method.

The source of referral to the clinics varied by ethnic group. While 40 percent of white girls came at the suggestion of a family member or a friend, 28 percent of blacks and other minorities did so. For black and other minority group members, hospitals were a major referral source: 30 percent of black girls, for example, were referred by a hospital, compared with two percent of white girls. Outreach workers and health and welfare agencies accounted for only five percent or fewer of referrals in all ethnic groups.

The investigators concluded that teenage patients represent a significant proportion of the patients seeking family planning assistance, and they recommended planned expansion of these services to meet an urgent need. They called for "special attention" to the needs of teenagers 15 years of age and younger, since the number of girls sexually active by age 15 is not insignificant. They represented six percent of the teenagers in the study.

[For a national overview of teenage sexuality, see: "28 Percent Have Had Sexual Relations: Half of These Used No Contraception," *Digest*, Vol. 1, No. 5, 1972, p. 6.]

Source

S. J. Wilson, L. Keith, J. Wells and R. C. Steptoe, "A Preliminary Survey of 16,000 Teen-Agers Entering a Contraceptive Program," *The Chicago Medical School Quarterly*, **32**:26, 1973.

Family Planning Digest

The Bureau of Community Health Services
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UK Fertility Study

90% Use a Method, Condom Leads All

More than nine out of 10 married couples at risk of unintended pregnancy in Britain used some form of contraception in 1970, and use has been increasing steadily over time. In recent years there has also been a relative increase in use of the more effective methods. This same trend was observed in the United States in the 1965 and 1970 National Fertility Studies. [See: "1970 National Fertility Study," *Digest*, Vol. 1, No. 6, 1972, p. 9.] There is little difference in contraceptive practice by religion. But the family planning news is not all good—Britain (even as the United States) is still far from being the "perfect contraceptive society." Among married couples at risk, about one-third were still using the least reliable methods (withdrawal and rhythm). Thirty-six percent of the most recent pregnancies were unintended. Among unmarried women, only one-quarter who were sexually active had used any method of contraception.

These are among the major findings of a landmark survey of family planning knowledge, attitudes and practices sponsored by the British Office of Population Censuses and Surveys and reported by Margaret Bone in *Family Planning Services in England and Wales*. Personal interviews with a national sample of 2,500 ever-married women aged 16-40 and 974 never-married women aged 16-35 were carried out in the period May-August 1970. The sample included representatives of all social classes, broken down as: professional, managerial and technical; clerical and supervisory; skilled manual; semiskilled and unskilled manual. The occupation of the husband defined the couples' social class, while the father defined that of the never-married woman.

Although contraceptive practice among married couples at risk was almost universal, the main methods used were not necessarily the most effective. The condom was the most widely used, by 36 percent of those at risk, followed by the pill, used by 25 percent, and coitus interruptus, practiced by 19 percent. The diaphragm, IUD and spermicides were used by five-six percent.

Pill use is increasing among recently married couples, while use of the condom is declining. Thus, 38 percent of couples at risk married between 1966 and 1970 were using the pill, compared with 30 percent of couples married between 1961 and 1965. (In the United States as of 1970, 33 percent of all younger married couples used the pill compared to 13 percent of couples where the wife was older than 30.) Thirty-one percent of Britain's 1966-1970 cohort at risk were using the condom compared with 35 percent of the previous cohort. (In the United States, eight percent of all younger and 11 percent of all older married couples used the condom.) The IUD remained relatively little used, and there was a four percentage point decline in use among the most recent marriage cohort.

Sterilization was much less popular in Britain than in the United States. Only four percent of all British married couples reported having had contraceptive sterilizations, compared with 11 percent of similar American couples. In England, it was almost always the woman who had the operation; in the United States, about half were female and half male sterilizations.

In England, where abortion has been legal since 1968, some two percent of fecund married women said they had had at least one abortion.

Despite the widespread use of contraception, 36 percent of the most recent pregnancies (whether terminated by live births or abortions) among all fecund married women were unintended. Seventeen percent were unwanted conceptions —'number failures'; 11 percent represented failure to delay a pregnancy wanted at a later time —'timing failures'. In the United States 44 percent of births which occurred in 1966-1970 among married women were described as unintended—15 percent were 'unwanted', and 29 percent were 'timing failures'. The author of the study observed that if the large group of condom users switched to the pill or the IUD, "a vast reduction in unplanned pregnancies might be expected." She emphasized, however, that failure with the condom was "more often the result of chance taking than method failure."

Never-Married Practices

Of the sexually active never-married women (aged 16-35) interviewed, only 24 percent said they had used contraception. Sixteen percent relied on their partners' use of the condom; nine percent used the pill and four percent depended upon withdrawal. None reported use of the IUD. More or less equal proportions of middle- and working-class women were sexually active, but the latter were less likely to have used contraception.

Almost two-thirds of the unmarried women said they intended to use contraception as soon as they married, but 13 percent said they would postpone using contraception until after they had had children. The author points out: "Intentions were related to age, so that more of the women over 25 . . . said they would first have the family they wanted . . . [and] a comparatively high proportion of the 16- and 17-year-olds also wanted a family first."

Sources

M. Bone, *Family Planning Services in England and Wales*, Her Majesty's Stationery Office, London, 1973.

C. F. Westoff, "The Modernization of U.S. Contraceptive Practice," *Family Planning Perspectives*, Vol. 4, No. 3, 1972, p. 9.

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